HISTORY OF CAPSICUM

By

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(Pharmacy)

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1 9 4 0

Chanca,- 1494

Second Voyage of C olumbus

Select Letters of Christopher Columbus, Hakluyt Society, Trans. by Major, R.H. V.2, p.65; Stafford Allen and Sons, The Romance of Empire Drugs, 1 ed., p.38; Pharmacographia 2 ed., p.452; Des Drogues, 2 ed., p.129.

In a letter to the Chapter of Seville during the second voyage of Columbus among other products gives the first authentic reference to the spice. He named the plant "Agi", the present name for Capsicum in Spanish.

Oviedo, F. 1535

(Fructus Capsici)

Historia de las Indias, 1851 reissue, p.275. (Pharmacographia, 1 ed., p.407; Ibid., 2 ed., p.452; Des Drogues, 1 ed., p.129.

Describes Capsicum and its uses.

Fuchs, L. 1542

Siliqvastrum maivs et minus.

Historia Stirpium, 1 ed., p.731. (Pharmacographia, 1 ed., p.407, Ibid., 2 ed., p.452; Des Drogues, 1 ed., p.129.)

Gives the first and excellent illustrations of capsicum longum D.C. under the name of Siliquastrum or Calicut Pepper. Also gives illustrations of long and short Indian Pepper.

Bauhin, J. 1598

Piper Calecutium sive Capsicum oblongins.

Histori novi, etc., p.943. (Woodville, Medical Botany, 2 ed., v. 2, p.226.)

The original was not available.

Clusius, C. 1611

(Fructus Capsici)

Curoe posteriores, p.95. (Pharmacographia, 1 ed., p.407, Ibid., 2 ed., p.452, Des Drogues, 1 ed., p.129.)

American capsicum had been generally introduced into the gardens of Castile, and that it was used all the year round, green or dried, as a condiment and as a pepper. He also saw it cultivated in abundance at Brünn in Moravia in 1585.

Parkinson, J. 1629

(Capsicum majus vulgatius, oblongis siliquis.)

Paradisi in sole Caradisus terrestris, p.355. (Woodville, Medical Botany, 2 ed., V.2, p.226.)

The original was not available.

Gerard, J. 1633

Capsicum longioribus siliquis.

Herbal, 2 ed., p.364. (Woodville, Medical Botany, 2 ed., V.2, p.226.)

Gives colored drawings of capsicum longiorbus siliquis and 2 other species of capsicum longiorbus siliquis and parts of several varieties of Ginnie Pepper. Gives descriptions, where found, common names and its ("vertues") uses.

Bauhin, C. 1671

Piper Indicum vulgetissimum.

Pinax Theatri, 2 ed., p.102. (Woodville, Med. Bot., 2 ed., V.2, p.226.)

Describes various species of capsicum including the one named above, and gives their uses.

Raij, J. 1688

Piper Indicum vulgatissimum.

Historia Plantarum, V.1, p.676. (Woodville, Medical Botany, 2 ed., V.2, p.226.).

Gives a discussion of the name and genus of capsicum, synonyms, habitat and the time it matures.

Tournefort, J.P. 1719

(Capsicum siliquis longis propendentibus.)

Institutionas re herbaris, 1 ed., p.152. (Woodville, Medical Botany, 2 ed., V.2, p.226.)

The original was not available.

Linne, C. 1737

(Class Pentandria, Ord. Monogynia.)

Geneva Plantarum, 1 ed., p.252. (Woodville, Med. Bot., 2 ed., V.2, p.226.)

The original was not available.

Lewis, W. 1761

Piper Indicum

An Experimental History of The Materia Medica, or of the Natural and Artificial Substances Made Use of In Medicine, 1 ed., p.445.

Gives scientific name, common names, description of fruit and medicinal properties and uses.

Miller, P. 1771

Capsicum.

Garden Dictionary, 7 ed., p.203. (Dispens. U.S.A., 19 ed., p.289; Ibid., 20 ed., p.287; Ibid., 21 ed., p.285; Ibid., 22 ed., p.283.

Gives the derivation of the name capsicum (capsa-L. a chest; because the seeds of this plant are included as it were in a little chest.) Also lists 10 species of capsicum with a short description of each and where he obtained his samples.

Duncan, A. 1791

Piper Indicum.

Edinburgh Dispens., 3 ed., p.257. (Woodville, Med. Bot., 2 ed., V.2, p.228.)

Gives scientific name, common names, and properties of Capsicum annuum.

Woodville, W. 1793

Capsicum Annuum

Medical Botany, 1 ed., V.2, p.226; Ibid., 2 ed., V.2, p.226. (Dispens. U.S.A., 2 ed., p.162; Ibid., 3 ed., p.157; Ibid., 4 ed., p.161; Ibid., 5 ed., p.167; Ibid., 6 ed., p.167; Ibid., 7 ed., p.167; Ibid., 8 ed., p.167; Ibid., 9 ed., p.173; Ibid., 10 ed., p.173; Ibid., 11 ed., p.179; Ibid., 12 ed., p.207; Ibid., 13 ed., p.216; Ibid., 14 ed., p.222, Ibid., 15 ed., p.349.

Gives a number of pharmacopoeial titles, botanical synonyms with references, discusses different parts of the plant, also a colored illustration of plant showing flowers and fruit. Uses, properties and dose are given.

Willdenow, C.L. 1797

Capsicum annuum

Linne's Species Plantarum,4 ed., V.1, P.1050.
U.S.P, 1820, p.31; U.S.P. 1830 (Phil.) p.7; (Dispens. U.S.A. 2 ed., p.162; ibid., 3 ed., p.157; ibid., 4 ed., p. 161; ibid., 5 ed., p.167; ibid., 6 ed., p.167; ibid., 7 ed., p.167; ibid., 8 ed., p.167; ibid., 9 ed., p.173; ibid., 10 ed., p.173; ibid., 11 ed., p.179; ibid., 12 ed., p.207; ibid., 13 ed., p.216; ibid., 14 ed., p.222; ibid., 15 ed., p.349; ibid., 16 ed., p.359; ibid., 17 ed., p.317; ibid., 18 ed., p.360; ibid., 19 ed., p.289; An American Physicium, Eclectic and General Dispens., 1 ed., p.127.

Gives scientific name, various synonyms and habitat of Capsicum Annuum.

Coxe, J.R. 1806

Capsicum Annuum

Am. Dispens., 1 ed., p.235; ibid., 4 ed., p.146; ibid., 6 ed., p.158; ibid., 7 ed., p.159; ibid., 8 ed., p.160; ibid., 9 ed., p.175.

Gives various English and Latin synonyms, habitat, description of pods, and medicinal use of capsicum.

Thacher, J. 1810

Capsicum Annuum

Am. New Dispens. 1 ed., p.90; ibid., 2 ed., p.168; ibid., 4 ed., p.160.

Gives the habitat, description of pods and medicinal use of capsicum.

Bucholz, C.F. 1816

Chemische Untersuchung des tracknen reifen spanischen Pfiffus. (Jahrige Beissbeerfinet. Fruebus capsici annui.)

Alman o. Tschb., 37, p.1. (Bull. the Univ. of Wis., No.980, p.121. Jour. Am. Pharm. Assoc., 18, p.1236.)

Designates the sharp tasting principle of Capsicum, "Capsicin".

Maurach, B. 1816

Pharmacuitisch - chemische Untersuchung des spanischen Pfeffers.

Berl. Jahrb. d. Ph., 17, p.63, (Bucholz - Alman o. Tschb., 1816, p.1.)

Gives synonyms of Capsicum annuum and method of extracting the constituents.

Braconnot, H. 1817

Examen chimique du Piment, de son principle acre, et de celui des plantes de la famille des renonculacees.

Ann. d. Chim. et c. Phys., S.2, V.6, p.122. (Pharm. Jour. 35, p.941; Ibid., 36, p.21.) Die C flanzenstoffe, p.882.

Examines capsicum as to various constituents and reports on 9 that were isolated.

Oersted, M. 1820

(Sur la decouverte de deux nouveaux alcalis vegetaux.)

Jour. de Physique de fevrier, (Jour. d. Pharmacie V.6, p.372.) Am. Jour. Pharm., 37, p.161.

Isolates a "New alkali of great acrimony in the fruit of capsicum annuum". Gives its properties, physical and chemical.

An American Physician. 1827

Capsicum.

Eclec. and Gen. Dispens. 1 ed., p.127.

Gives various official, names, non-official synonyms, qualities, medical properties and uses, and official preparations of capsicum.

Roxburgh, A.B. 1832

(Fructus Capsici.)

Flor. Ind., v.1, p.574. (Pharmacographia, 1 ed., p.406; ibid., 2 ed., p.452, Des Drogues, 1 ed., p.129.

Describes capsicum fastigiatum Blume under the name C-minimum, terms it "East Indian Bird Chilly" or "Cayenne Pepper Capsicum".

Wood, G.B. and Bache, F. 1834

Capsicum, U.S.

Dispens. U.S.A., 2 ed., p.162; ibid., 3 ed., p.157, ibid., 4 ed., p.161; ibid., 5 ed., ;.167; ibid., 6 ed., p.167; ibid., 7 ed., p.167; ibid., 8 ed., p.167; ibid., 9 ed., p.173; ibid., 10 ed., p.173; ibid., 11 ed., p.179; ibid., 12 ed., p.207; ibid., 13 ed., p.215; ibid., 14 ed., p.221; ibid., 15 ed., p.349; ibid., 16 ed., p.359; ibid., 17 ed., p.317; ibid., 18 ed., p.322; ibid., 19 ed., p.288.

Gives various official names, non-official synonyms, description of the plant, physical and chemical properties and medical properties, uses and official preparations of capsicum.

Lindley, J. 1838

Capsicum.

Flora Medica, 1 ed., p.509.

Gives a detailed description of Capsicum Annuum and several uses.

Proctor, W., Jr. 1849

Remarks on Oleoresinous Ethereal Extracts.

Am. Jour. Pharm., 21, p.114, (Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V. 19, Part 2, p.1191.)

Describes a method of preparation of an ethereal extract of capsicum.

Turnbull, A. 1850

Concentrated Tincture of Capsicum, A Remedy for Chilblains and Toothache.

Pharm. Jour., 9, p.362.

Describes the method of using Tincture of Capsicum for chilblains and toothache.

Wight, R. 1850

(Fructus Capsici.)

Icones Plant. Indiae Orient., V.4, p.1617. (Pharmacographia, 1 ed., p.406; ibid., 2 ed., p.452; Des Drogues, 1 ed., p.129.)

States that Cayenne Pepper, Capsicum is consumed by the natives of India, but that it is not the sort preferred.)

King, J. and Newton, R.S. 1852

Capsicum Annuum.

Eclec. Dispens. U.S.A., 1 ed., p.105.

Gives the history, properties, uses, and a list of official preparations of capsicum.

Bakes, W.C. 1853

Extract of Capsicum.

Am. Jour. Pharm., 25, p.513. (Bull. Univ. Wis., No.980, p.121, Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1191.

Prepared an extract at the request of a physician and used it in simple ointment as a rubefacient.

Landerer, X. 1854

Ueber das Capsicin aus Capsicum annuum

Vierteljahress, Cr. Pharm., 3, p.34. (Char. Jour. 35, p.941.) Jour. Am. Phar. Assoc., 18, p.1245; Husemann, T., Die Pflanzenstaffe, 1 ed., p.882.)

Expresses the belief that the active principle of Capsicum is an alkaloid. He failed, however, to obtain any crystalline compounds with acids.

Taylor, H.B. 1857

On Capsicum Annuum.

Am. Jour. Pharm., 29, p.303.

Reports the results of experiments on Capsicum and gives 2 conclusions.

Heydenreich, F.V. 1858

On Capsicum Annuum.

Am. Jour. Pharm., S.3, V.30, p.296. (King's Am. Dispens. 6 ed., p.191; ibid., 8 ed., p.184; ibid., 10 ed., p.185; ibid., 15 ed., p.185; ibid., 16 ed., p.185. Proc. Am. Pharm. Assoc., 7, p.58; Jour. Am. Pharm. Assoc., 18, p.1245.

Reports the results of experiments on capsicum.

King, J. 1864

Capsicum Annuum.

Am. Dispens., 6 ed., p.190; ibid., 8 ed., p.184; ibid., 10 ed., p.184; ibid., 15 ed., p.184; ibid., 16 ed., p.184.

Gives description of plant, part of the plant used, history, properties, uses and official preparations of capsicum.

Parrish, E. 1864

On Capsicum.

Proc. Am. Pharm. Assoc., 12, p.262. (Jahresb. f. Pharm., 1, p.68.) Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, v.19, Part 2, p.1191.

Discusses the constituents of capsicum and calls the ethereal extract an oleoresin.

Preston, D. 1865

On Capsicum Annuum.

Am. Jour. Pharm., 37, p.161. (Dispens. U.S.A., 13 ed., p.217; ibid., 14 ed., p.223.)

Summarizes work of M. Oersted, 1820, Bucholz and Maurach, 1816, Braconnot, 1817, H. B. Taylor, 1857, Heydenreich 1858, reports the results of his experiments on Capsicum and gives his conclusion.

Lyons, 1866

(Suggests Use of Capsicum In Delirium Tremens)

Med. Press and Circ. (Dispens. U.S.A., 13 ed., p.217; ibid., 14 ed., p.223; ibid., 15 ed., p.351; ibid., 16 ed., p.361; N.T. Med. Jour., Am. Jour. Pharm. 39, p.183.

Suggests the use of capsicum in delirium tremens and the possibility of its containing a narcotic principle.)

Felletar, E. 1868

(Vorlaufige Notiz uber das baische Capsicin.)

Pharm. Post., 1, p.285; (Arch. d. Pharm., 185, 261; Am. Jour. Pharm., 41, p.432; Proc. Am. Pharm. Assoc., 18, p.267.

Capsicum annuum is used against intermittent fever. A volatile alkaloid has been discovered. Capsicina.

Wiggers, A., Husemann, A. 1868

Capsicum annuum

Jahresbericht, d. Pharm., 28, p.70. (Pharm. Jour. 35, p.941)

The fruit of Capsicum contains an alkaloid similar to Covine. Gives different methods of extracting the alkaloid.

Felletar, E. 1870

Sur la Capsicine.

Journal d. Pharm. et d. Chim., V.90, p.347. (Dispens. U.S.A., 14 ed., p.223; ibid., 15 ed., p.350; ibid., 16 ed., p.360; ibid., 17 ed., p.318; ibid., 19 ed., p.291; ibid., 20 ed., p.289.

Extracted the alkaloid capsicine from capsicum annuum.

_____ 1871

(Fructus Capsici.)

Blue Book of the Colony of Sierra Leone; Pharmacographia, 2 ed., p.455, Des Drogues, 1 ed., p.129.

(The export of Chillies or Pod Pepper from Sierra Leone in 1871 reached 7258 lb.)

Husemann, A. and Husemann, T. 1871

Capsicin und Capsicumroth.

Die Pflanzenstoffe, 1 ed., p.882.

Discusses capsicin, its extraction and uses. Reviews the work done by Braconnot, Witting and Landerer.

Husemann, A. and Husemann, T. 1871

Capsicol.

Pflanzenstaffe, 1 ed., p.1136. Pharm. Jour. 35, p.941.

A short account of a substance called capsicol (which was afterwards prepared and examined by Buchheim.)

Heinitsh, C. 1871

Capsicum.

Am. Jour. Pharm., 43, p.568.

Presented a sample of capsocum at the Philadelphia Pharmacy meeting, having raised it from seed brought from Mexico.

Maisch, J.M. 1872

Capsicum.

Am. Jour. Pharm., 44, p.89.

At a meeting of the Phil. Pharm. stated that the sample presented by Heintesh at a previous meeting was the fruit of capsicum minimum indigenous to Mexico.

Maisch, J.M. 1872

On the Use of Petroleum-Benzine in Making Oleoresins.

Am. Journ. Pharm. 44, p.208. (Pharm. Jour. 31, p.968; Proc. Am. Pharm. Assoc., 21, p.138; Yrbk Pharm. Conf., 10, p.328. Bull. Univ. Wis., No.980, p.121, Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1191.

Petroleum benzin is suggested as a substitute for ether in preparation of oleoresin of capsicum.

Attfield, J. 1873

Alkaloids.

Chemistry, 4 ed., p.444. Pharm. Jour. 35, p.941.

Gives capsicine, or capsicia in his list of alkaloids and adds that "it is crystalline, and forms crystalline salts with acids."

Buchheim, R. 1873

Fructus Capsici.

Vierteljahrschr. prakt. Pharm., 22, p.507. (Bull. Univ. Wis. No.980, p.121; Jour. Am. Pharm. Assoc., 18, p.1245, Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1191.

The capsicin sold by the firm E. Merck is stated to be the ethereal extract of the capsicum fruit.

Fluckiger, F.A. and Hanbury, D. 1874

Fructus Capsici.

Pharmacographia, 1 ed., p.406; Ibid., 2 ed., p.452, Des Drogues, 1 ed., p.129.

Gives a list of synonyms, botanical origin, history, description, microscopic structure, chemical composition, commerce and uses of capsicum fruit.

(Committee) 1876

Report of the Committee on Adulterations and Sophistications.

Proc. Am. Pharm. Assoc., 24, p.404.

Among other things examined for adulterations was Cayenne Pepper which was found to have over 50% turmeric, wheat and corn-starch and a small percentage of horseradish.

(Committee). 1876

Report of The Committee on the Centennial Exhibition.

Proc. Am. Pharm. Assoc., 24, p.720.

Among other things examined the committee gives an account of a large number of fruit species of Capsicum, which are probably from Capsicum fastigiatum and Capsicum frutescens, appearing under the name Chillies or Red pepper. They are cultivated generally in India.

When powdered they constitute chilly powder, or cayenne pepper.

Thresh, J.C. 1876

Capsicine; An Alkaloid Said to be contained in Capsicum Fruit. Does It Exist?

Pharm. Jour. 35, p.941. (Ibid., 36, p.21; Amer. Jour. Pharm., 48, p.355; Proc. Am. Pharm. Assoc., 24, p.133.)

Gives an account of the controversy over the possibility of an alkaloid in capsicum annuum. Proves that the acrid principle is not an alkaloid. He, however, isolated an alkaloid resembling conine which is capable of forming crystallizable salts. He found that the seeds after the removal of the pericarp and washing and drying them are entirely devoid of acridity or pungency.

Thresh, J.C. 1876

Capsaicin, The Active Principle of Capsicum Fruits.

Pharm. Jour. 36, p.21. (Am. Jour. Pharm., 105, p.325.) Proc. Am. Pharm. Assoc., 25, p.31 to 317; Ibid., 24, p.133. Jour. Am. Pharm. Assoc., 18, p.1246.

Discusses the preparation of capsaicin by dialysis and its reaction with common "reagents" and other properties.

Thresh, J.C. 1876

Capsaicin: The Active Principle of Capsicum Fruit.

Pharm. Jour. 36, p.259. (Am. Jour. Pharm., 105, p.325; Proc. Am. Pharm. Assoc., 25, p.31and 317; ibid., 24, p.133. Jour. Am. Pharm. Assoc., 18, p.1246.

Gives a method of preparation of capsaicin and its physical and chemical properties in detail. Also gives an account of physiological experiments he conducted on himself.

Thresh, J.C. 1876

The Active Principle of Cayenne Pepper.

Pharm. Jour. 36, p.473. (Am. Jour. Pharm., 105, p.325). Proc. Am. Pharm. Assoc., 25, pp. 31-and 317; ibid., 24, p.133. Jour. Am. Pharm. Assoc., 18, p.1246.

Gives the results of an analysis of capsaicin.

Thresh, J.C. 1877

Report on the Active Principle of Cayenne Pepper.

Yrbk. Br. Pharm. Con., V.14, p.485. (Am. Jour. Pharm., 49, p.90; Proc. Am. Pharm. Assoc., 26, p.618.)

The method of preparation and properties of capsaicin as obtained from an alcoholic extract of cayenne are discussed; also gives some uses and a method of obtaining the coloring matter.

Stille, A. and Maisch, J.M. 1879

Capsicum.

National Dispens., 1 ed., p.343, Ibid., 2 ed., p.347.

Gives various synonyms english and latinized, botanical origin, constituents, physiological action, medical uses and official preparations of capsicum.

Greenish, T. 1880

A sample of cayenne.

Yrbk. Br. Pharm. Con., V.17, p.529 (Amer. Jour. Pharm., 52, p.524.)

Reports a cayenne with no pungency and an oily appearance similar to "paprika".

Fluckiger, F.A. 1881

Fructus Capsici.

Pharmakognosie des Pflanzenreiches, 2 ed., p.840; Ibid., 3 ed., p.889. (Pharm. Jour. 35, p.941.)

Give a list of synonyms, botanical origin, history, description, chemical composition, commerce and uses of capsicum fruit.

Christy, T. 1882

Sircet Pepper.
Capsicum tetragenum var.

New Comm. Plants, No.6, p.101.

Capsicum tetragonum var. has all the delicate flavour of cayenne, without its irritating properties. It is used to color the canaries' feathers.

Christy, T. 1882

Sircet Pepper.
Capsicum annuum var.

New Comm. Plants. No.5, p.74.

A variety of capsicum which has all the delicate flavour of cayenne, without its irritating properties. Used as a stimulant for poultry and has been found to color the feathers brightly when given to c anaries.

MacDonald, A.D. 1883

Powder of Capsicum.

British Med. Jour. 1883, V.1, p.251. (Amer. Jour. Pharm., 55, p.200; Proc. Am. Pharm. Assoc., 31, p.113.)

Discusses the use of powdered capsicum in rheumatism.

Christy, T. 1884

Capsicums.

New Comm. Plants, No.7, p.81.

Mentions capsicum samples received from Mexico that were of a dark color.

Christy, T. 1884

Sivcet cayenne pepper. (Capsicum-Annuum var.)

New Commercial Plants, No.4, 2 ed., p.15.

Gives illustrations of the fruit and a discussion of the sweet capsicum or cayenne without pungency.

Husemann, A. and Husemann, T. and Hilger, A. 1884

Capsicum.

Die Pflanzenstaffe, 2 ed., p.1158.

Discusses the work done on capsicin, Capsicumroth (an extract with wine), Capsicol and capsaicin.

Thresh, J.C. 1884

The Pungent Principles of Plants.

Yrbk. Pharm. Conf., 21, p.516. (Proc. Jour. Am. Pharm. Assoc., 33, p.257.)

A resume of his work on the pungent principles of plants. Capsaicin is mentioned.

Maisch, J.M. 1885

Materia Medica of the New Mexican Pharmacopaeia.

Am. Jour. Pharm., 57, p.552.

Discusses the different species of capsicum in Mexico.

McKeown, S.W. 1885

Capsicum.

Proc. Ohio Pharm. Assoc., V.7, p.95. (Am. Jour. Pharm., 57, p.364.)

Reports on the adulteration of capsicum.

Warnecke, H. 1886

Der Aschengehalt einiger pharmaceutisch wichtiger Samen, Fruchte und Frucktheile.

Pharm. Zeit. 31, p.536. (Pharm. Jour., V.33, p.330) Am. Jour. Pharm., 59, p.28.

Gives ash percentage in a number of important fruits including capsicum.

(Editor) 1888

Tinctura Capsici Fortior.

Pharm. Jour. 48, p.182.

Gives a formula and a new method of preparation of a strong tincture of capsicum, with its dose.

Prebble, J.G. 1888

Notes on East Indian Gums

Pharm. Jour., 48, p.1. (Am. Jour. Pharm., 60, p.457.)

Discusses the use of Capsicum annuum in India.

Trimble, H. 1888

The Comparative Extractive Powers of Ether and Benzin.

Proc. Penn. Pharm. Assoc., 11, p.60; (Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1191.)

Gives the percentage of oleoresin of capsicum obtained by extraction with ether and benzin.

Meyer, A. 1889

Der Sitz der scharfschmeckenden Substanz im spanischen Pfeffer.

Pharm. Ztg., 34, p.130. (Archiv. d. Pharm., 227, p.318; Am. Jour. Pharm., 61, p.179; Proc. Am. Pharm. Assoc., 37, p.441 and 732. Jour. Am. Pharm. Assoc., 18, p.1245. Pharm. Jour. 48, p.1051.)

Describes a method of isolating capsaicin and that it is found chiefly in the placenta in Spanish Pepper.

(Editor) 1892

Soluble Cayenne Pepper.

Chem. and Drugg. 41, p.489. (Proc. Am. Chem. Assoc., 41, p.702.)

Gives a method of preparing cayenne Pepper-Soluble.

Pabst, H. 1892

Zur chemischen Kenntris der Fruchte von Capsicum annuum.

Archiv. der Pharm., 230, p.108. (Amer. Jour. Pharm., 64, p.370.) Dispens. U.S.A., 20 ed., p.289; Dispens. U.S.A., 17 ed., p.318; Proc. Am. Pharm. Assoc., 41, p.223; Ibid., 41, p.702; Pharm. Jour. 51, p.1004.

A study of the chief constituents of the fruit of Capsicum annuum.

Sherrad, C.C. 1892

Value of Oleoresinous Drugs.

Chem. and Drugg., 40, p.523. (Yrbk. Br. Pharm., Conf., 29, p.157.)

Gives the yield of oleoresin of capsicum obtained by extraction with ether.

Hartwick, C. 1894

Epidermis der Samenschale von Capsicum.

Pharm. Post., 27, p.609. (Proc. Am. Pharm. Assoc., 43, p.886.)

A classification of capsicum into Class A and Class B based upon the character of the cell walls.

Alpers, W.C. 1896

Oleoresin Capsicum.

Merck's Rep., 5, p.593. (Proc. Am. Phar. Assoc., 45, p.435.)

Gives a method of preparation and yield of oleoresin of capsicum and illustrations of equipment used in the process.

Holmes, E.M. 1897

Recent Additions to the Museum

Pharm. Jour. 59, p.519. (Proc. Am. Jour. Pharm., 46, p.800.)

Japanese Chillies. A new commercial variety of Capsicum, Capsicum, minimum, Post (Capsicum fastigiatum, B.Bl.) and is found more effective for medicinal purposes.

Morbitz, J. 1897

Ueber die sharfe Substanz des spanischen Pfeffens

Pharm. Centrhl. 38, p.583; (Pharm. Woch., 14, p.525; Pharm. Jour. V.57, p.298; Proc. Am. Jour. Pharm., 46, p.800; Jour. Am. Pharm. Assoc., 18, p.1236; Jour. Indus. andEnglish Chem., 2, p.419.)

Gives a method of preparation of capsacutin an active principle of capsicum and the properties of capsacutin $C_{35}H_{54}N_3O_4$.

Braithwaite, J.O. 1898

Capsaicin, Thresh. - Capsacutin, Morbitz.

Pharm. Jour. 60, p.112.

Discusses as to what is the active principle of Capsicum as described by Thresh in 1876 and by Morbitz in 1897.

Felter, H.W. and Lloyd, J.V. 1898

Capsicum Annum.

King's Am. Dispens., 18 ed., p. 434.

Give botanical source, history, adulterations, description, chemical composition, action, medical uses, dosage, specific indications and uses of capsicum.

Irish, H.C. 1898

(Capsicums.)

Missouri Botanic Garden, 1898, p.53. (Pharm. Jour. 61, p.417.)

(A revision of the genuo Capsicum in which he has reduced all the species with the exception of fourteen to two species.)

Leech, W.F., Sayre, L.E. 1898

A Microscopical Study of Capsicum.

Proc. Kansas Pharm. Assoc., 19, p.27. (Proc. Am. Pharm. Assoc.,) 47, p.526.)

Discusses the microscopical examination with plates showing cell detail and attempts to distinguish between commercial varieties and to detect adulterants.

Micko, K. 1898

Zur Kenntniss des Capsaicins.

Ztschr. f. Unters. d. Nahr. u. Genussm., p.818. (Apoth. Ztg., 14, p.493. Proc. Am. Pharm. Assoc., 48, p.839; Jour. Indus. and Eng. Chem., 2, p.419; Am. Jour. Pharm. 105, p.325; Jour. Am. Pharm. Assoc., 18, p.1245; Pharm. Jour. 62, p.383.)

Describes a new method by which Capsaicin in a pure condition is obtained. Prepared it from "Konigspaprika" and Cayenne Pepper. Also established that Capsaicin was the active pungent and irritant principle of capsicum.

Winton, A.L., Ogden, A.W. and Mitchell, W.L. 1898

Analyses of Spices

Rep. of Conn. Agr. Exp. Sta. 22, p.200. (Bull. Univ. Wis., No,980, p.121.) Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1163.

Give the amount of extractive matter obtained with ether from different samples of red peppers.

Hart, J.H. 1899

(The Capsicum Habit.)

Mirror, a Trinidad Newspaper, not available. (Pharm. Jour. 63, p.30.)

Discusses the harmful effects from using capsicum to season food.

Micks, K. 1899

Ueber den wirksamen Bestandtheil des Cayennepfeffers.

Zeits. f. Unters, I.N. u. Genussm., 2, p.411. (Jour. Indus. and Eng. Chem., 2, p.419.)

Developed a process for the isolation of capsaicin and proved it to be that pungent principle of pepper (capsicum fastigiatum). Capsicum fastigiatum contains about 20 times as much capsaicin as capsicum annuum.

(Editor) 1900

Capsici Fructus.

Pharm. Jour., 64, p.276.

Gives a description, physical properties, and uses of Capsicum minimum and names its constituents.

Lenton, W.H. 1901

The Ash of Capsicum Fruits.

Pharm. Jour. 67, p.558.

Compares the ash of capsicum annuum with that of Capsicum minimum.

Wallis, T.E. 1901

The Structure of Capsicum Minimum.

Pharm. Journ., 67, p.552. (Proc. Am. Pharm. Assoc., 50, p.829.)

Gives a detailed account of the structure of the fruit of capsicum minimum with drawings.

Guillard, J. 1902

(Les Piments de Solaniees.)

Thesis,. (Pharm. Jour. V.68, p.553; Proc. Am. Pharm. Assoc., 50, p.828,)

A comparison of the total ash content of the fruit of Capsicum minimum and Capsicum annuum.

Kebler, L.F. 1902

The Adulteration of Drugs.

Am. Jour. Pharm., 74, p.20. (Pharm. Jour. 68, p.554.)

Paprika is used as an adulterant of capsicum.

Beythien, A. 1903

Capsicum.

Zeitschr. Unters. Nahr. u. Genussm., 5, p.858. Pharm. Ztg., 47, p.549; Proc. Am. Pharm. Assoc., 51, p.747; Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1167.

Gives the amount of extractive material obtained from Capsicum with ether and alcohol.

(Editor) 1903

Capsicum.

Southall Bros. and Barclay, Lab. Rep., 11, p.13. Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1166.

Reports the amount of extractive material obtained from the fruit capsicum minimum and capsicum annum.

Niece, F.E. 1904

Capsicolatum.

Proc. Penna. Pharm. Assoc., 27, p. 192. (Proc. Jour. Am. Pharm. Assoc., 53, p.605.)

Capsicolatum is a counter-irritant ointment obtained by digesting 1 ounce of powdered capsicum with 4 ounces of yellow petrolatum.

Gerrard, A.W. 1905

A contribution to the Pharmacy of Capsicum.

Yrbk. Brit. Pharm. Cont., 42, p.451. (Proc. Am. Phar. Assoc., 54, p.739; ibid., 54, p.628; ibid., 54, p.620; ibid., 54, p.671; ibid., 54, p.616; Am. Jour. Pharm., 77, p.433. Pharm. Jour. 75, p.153.)

Discusses the proper solvents for making pharmaceutical preparations of capsicum, capsicum wool, capsicum plaster, capsicum ointment, liquid extract of capsicum.

(Editor) 1905

The Newer Remedies.

Am. Drugg. and Pharm. Rec., 46, p. 135; Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1172.

Capsolin manufactured by P.D. and Co. is recommended as a substitute for mustard plasters.

Vanderkleed, C.E. 1905

Report of the Committee on Adulterations.

Proc. Penna. Pharm. Assoc., 28, p.47. Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1167.

Gives the results of 8 assays of capsicum for oleoresin and gives a standard for a good drug.

Judd, A.F. 1907

Ash Determinations of Asafetida and Other Common Drugs.

Am. Jour. Pharm., 79, p.379.

Includes an ash determination of capsicum.

Patch, E.L. 1907

Report of Committee on Drug Market.

Prof. Am. Pharm. Assoc., 55, p.314. Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1172.

Gives the percentage of alcoholic extract obtained from capsicum.

Patch, E.L. 1908

Report of Committee on Drug Market.

Proc. Am. Pharm. Assoc., 56, p.765. Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1173.

Different samples of capsicum yielded from 15-25.2% of alcoholic extract.

Vanderkleed, C.E. 1908

Report of Committee on Adulteration.

Proc. Penna. Pharm. Assoc., 31, p.65. Bull. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1173.

Gives percentage of oleoresin obtained from 3 samples of capsicum.

LaWall, C.H. 1909

A Method for the Detection of Small Quantities of Capsicum in Ginger Ale and Other Preparations of Ginger.

Am. Jour. Pharm., 81, p.218. (Jour. Am. Pharm. Assoc., 18, p.1245; Pharm. Jour. 83, p.105.)

Discusses a method of detecting capsicum in Ginger Ale and other preparations of ginger.

Vanderkleed, C.E. 1909

Report of the Committee on Adulteration.

Proc. Penna. Pharm. Assoc., 32, p.119. Univ. Wis., No.980, p.121; Trans. Wis. Acad. Sci., Arts and Letters, V.19, Part 2, p.1173.

Gives the percentage of oleoresin obtained from 5 samples of capsicum.

Nelson, E.K. 1910

Capsaicin, the Pungent Principle of Capsicum and the Detection of Capsicum.

Ind. and Eng. Chem., 2, p.419. Jour. Am. Pharm. Assoc., 18, p.1245; Chem. News, 21, p.111; Proc. Am. Pharm. Assoc., 59, p.186; Am. Jour. Pharm., 105, p.325; Ibid., 110, p.242; Pharm. Jour. 86, p.249.

Gives a method for the detection of capsicum in ginger ale by the extreme pungency of capsicum.

Scoville, W.L. 1911

Note on Capsicum.

Proc. Am. Pharm. Assoc., 59, p.453. Am. Jour. Pharm., 83, p.440; Bull. Am. Pharm. Assoc., 6, p.641.

Proposes an organoleptic test for capsicum.

Holmes, E.M. 1912

Japanese Chillies.

Yrbk. Brit. Pharm. Conf., 49, p.521. Yrbk. Am. Pharm. Assoc., 1, p.163.

Gives results of an investigations regarding the botanical source of the bright red Japanese chillies that have been imported into England during recent years.

Lucas, E.W. 1912

The Ointments of the British Pharmacopoeia

Chem. and Drugg., 80, p.262. Yrbk. Am. Pharm. Assoc., 1, p.75.

A new formula is suggested for Unguentum Capsici in the British Pharmacopoeia.

Nelson, E.K. 1912

Capsaicin.

Zeit. Unteir. Nahr. and Genussm., 23, p.407. Pbr. Centrlhl., 53, p.425. Drugg. Circ., 57, p.70.

Reports his work on the pungent principle of capsicum.

Scoville, W.L. 1912

Note on Capsicums.

Jour. Am. Pharm., Assoc., 1, p.453. (Ibid., 18, p.1246; Pharm. Jour. 89, p.201).

Discusses the organoleptic tests proposed for the capsicums.

Engelhardt, H. 1913

Purity of Chemicals and Drugs.

Jour. Am. Pharm. Assoc., 2, p.164.

Six samples of capsicum yielded 13.1, 14.8, 15.26, 15.8, 11.3, and 11.0%, respectively, of oleoresin.

Holmes, E.M. 1913

Sweet or Non-Pungent Cayenne Pepper.

Pharm. Jour., 90, p.626.

Gives an account of various species of Capsicum as to their relative pungencies.

Umney, J.C. 1914

What Is Capsicin?

Pharm. Jour. 91, p.594. (Jour. Am. Pharm. Assoc., 18,p.1246.)

The name "capsicin" is given to an alcoholic extract of Capsicum.

(U.S.P. Revision Committee) 1914

Capsicum.

Jour. Am. Pharm. Assoc., 3, p.369.

Gives the proposed monograph of capsicum.

Blair, T.S. 1917

Capsicum.

Botanic Drugs, 1 ed., p.120.

Discusses the medicinal use and dose of cayenne pepper.

Boyles, F.M. 1917

Red Peppers

J. Ind. Eng. Chem., 9, p.301. Yrbk. Am. Pharm. Assoc., 6, p.220.

Reports the result of analyses of a large number of typical samples of various varieties of capsicum and gives conclusions arrived at.

Remington, J.P. and Wood, C.W., Jr. 1918

Capsicum, U.S. (Br.)

Dispens. U.S.A., 20 ed., p.286; Ibid., 21 ed., p.285; Ibid., 22 ed., p.282.

Gives various official and non-official synonyms, description of the plant, physical and chemical properties, medicinal properties, uses, dose, and official preparations.

(Editor) 1919.

(Capsogen.)

Pharm. Weekblad., 56, p.1610. Yrbk. Am. Pharm. Assoc., 8, p.128.

(Capsogen is a bandage, impregnated with a tincture of Capsicum and used for rheumatism and gout.)

Nelson, E.K. 1919

The Constitution of Capsaicin, the Pungent Principle of Capsicum.

J. Am. Chem. Soc., 41, p.1115. (Jour. Am. Pharm. Assoc., 18, p.1245; Pharm. Jour. 103, p.383.)

Reports the method of isolating crystalline capsaicin and determining its structure.

Dohme, R.L. 1920

Capsicum.

Jour. Am. Pharm. Assoc., 9, p.303.

The percentage of ether-soluble oleoresin in capsicum should be reduced in the U.S.P. The average yield of oleoresin is 12%.

(Editor) 1920

Capsicum in Ginger Ale to Be Stated on Label

Jour. Am. Pharm. Assoc., 9, p.459.

Federal inspectors are ordered to seize all ginger ale not reporting on label that they contain capsicum.

Nelson, E.K. 1920

The Constitution of Capsaicin, the Pungent Principle of Capsicum. II.

J. Am. Chem. Soc., 42, p.597. (Jour. Am. Pharm. Assoc., 18, p.1245.)

Reports continued work isolating crystalline capsaicin and determining its structure.

Gathercoal, E.N. and Terry, R.E. 1921

The Capsicum Monograph in U.S.P. X.

Jour. Pharm. Assoc., 10, p.423. (Dispens. U.S.A., 21 ed., p.287, Jour. Am. Pharm. Assoc., 18, p.1037; Ibid., 23, p.24.)

Discuss the desirability of excluding all commercial forms of cayenne pepper except the African Chillies.

(Editor) 1922

New Remedies and Trade-Named Preparations.

Am. Drugg., 70, No.10, p.32. (Yrbk. Am. Pharm. Assoc., 11, p.164.)

Capsogen is a new wet or dry bandage in the treatment of rheumatism, gout, etc.

Nelson, E.K. and Dawson, L.E. 1923

Constitution of Capsaicin, the Pungent Principle of Capsicum. III.

J. Am. Chem. Soc., 45, p.2179. (Jour. Am. Pharm. Assoc., 18, p.1245.).

Report continued work on determining the structure of crystalline capsaicin ($C_{18}H_{27}NO_3$).

(Editor) 1924

Compound Capsicum Ointment.

Spatula, 31, p.58. (Yrbk. Am. Pharm. Assoc., 13, p.51.

(Gives a formula and method of preparation of a compound capsicum Ointment.)

(Editor) 1924

Pharmaceutical Formulas.

Jour. Am. Pharm. Assoc., 13, p.472.

Gives a formula for a capsicum ointment.

Riccomanni, C. 1924

(Relations between Chemical Constitution and Taste)

Atti. accad. Lincei, 33, p.145. (Chem. Abstr., 18, p.2900; Jour. Am. Pharm. Assoc., 18, p.1246.)

Shows that the piperidine nucleus is not necessary for characteristic sharp or pungent tastes as a number of methyl ketones, including phenyl-methyl ketone.

Wirth, E.H. and Gathercoal, E.N. 1924

Report of The Scoville Organoleptic Method for the Valuation of Capsicum.

Jour. Am. Pharm. Assoc., 13, p.217; Ibid., 18, p.1246; Yrbk. Am. Pharm. Assoc., 13, p.51.

A discussion of the experiments carried out at the meeting on the organoleptic test for the pungency of capsicum.

Stary, Z. 1925

Stimulation of Heat Nerves by Pharmaceutical Substances.

Arch. exptl. Path. Pharmakol., 105, p.76. (Chem. Abstr., 19, p.1602; Jour. Am. Pharm. Assoc., 18, p.1246.

The sharp taste of paprika, pepper and ginger is due to stimulation of the endings of the heat nerves in the tongue.

Wobbe, W. 1925

Capsifor.

Arch. d. Pharm. u. Ber. deutsch. pharm., Ges., 263, p.389. (Yrbk. Am. Pharm. Assoc., 14, p.143.)

Capsifor is a soap jelly used for rheumatism and neuralgia.

Wasicky, R. and Klein, F. 1926

Uber die Wert bestimmung von Capsicum.

Pharmakognostischen Institut der V. Wein. Festschrift für A. Tschirch., p.357. (Jour. Am. Pharm. Assoc., 18, p.1246; Yrbk. Am. Pharm. Assoc., 15, p.371.)

Describes an attempt to develop an organoliptic test for Capsicum.

Youngken, H.W. 1926

Capsicum U.S.P. (Capsicum)

Pharmacognosy, 2 ed., p.559. (Dispens., U.S.A., 21 ed., p.287.)

Gives synonyms, botanical origin, part used, limit of impurities, standard of assay, ash, habitat, plant, production and commerce, description, histology, constituents, uses and adulterants of capsicum.

(Editor) 1928

Capsol.

Chem. and Drugg. 108, p.43. (Jour. Am. Pharm. Assoc., 17, p.980.)

A formula and method of preparation of a capsicum ointment, Capsol, are given.

Greenish, H.G. 1929

Capsicum Fruits.

Materia Medica, 5 ed., p.123, Ibid., 6 ed., p.123.

Gives synonyms, botanical source, description constituents, microscopial characters varieties and uses of capsicum.

Greenish, H.G. 1929

Capsicum Fruits.

A Text Book of Materia Medica, 5 ed., p.123; Ibid., 6 ed., p.123.

Discusses several kinds of capsicum giving the botanical source, description constituents, microscopial characters, varieties and uses. Several illustrations of the fruit are given.

Munch, J.C. 1929

Bioassay of Capsicums and Chillies I.

Jour. Am. Pharm. Assoc., 18, p.1236. (Yrbk. Am. Phar. Assoc., 18, p.180.)

Gives a summary of the active principles of capsicum, a bioassay of capsicum, oleoresin of capsicum, pungency of capsicum seed, capsaicin and several conclusions.

Beardsley, W.J. and Bolton, F.J. 1930

The Capsicum Tincture of the B.P.

Pharm. Jour., 125, p.97.

Discuss the difference between tincture of Capsicum made in winter and that which is made in the summer.

Fodor, K. 1931

Uber eine neue Reaktion des Capsaicins.

Zeitschr. f. Untersuch. Lebensm., 61, p.94; (Chem. Abstr., 25, p.4356; Yrbk. Am. Pharm. Assoc., 20, p.204; Brit. Chem, Abstr., B, p.611.)

Discusses a method for preparing the blue vanadyl capsaicin, $C_{18}H_{26}NO_3 \cdot VOCl_2$

Redgrove, H.S. 1932

The Botanical Source and Constituents of Capsicum.

Pharm. Jour. 128, p.47. (Dispens. U.S.A., 22 ed., p.285.) Yrbk. Am. Pharm. Assoc., 21, p.312.

Gives the botanical source, and discusses the pungent principle, capsaicin of capsicum.

Redgrove, H.S. 1932

Hair Preparations Made with Iso-Propyl Alcohol.

Pharm. Jour. 129, p.51.

Gives a formula for a Capsicum Hair Lotion.

Stafford, Allen and Sons Ltd. 1932

Capsicum - E. and W. Africa

The Romance of Empire Drugs, 1 ed., p.37. Chem. and Drugg., 117, p.4.

Gives an illustration of capsicum frutescens, a short history, discussion of various species and medicinal use.

Dickey, V.L., and Nitardy, F.W. 1933

Tincture of Capsicum

Jour. Am. Pharm. Assoc., 22, p.135. (Yrbk. Am. Pharm. Assoc., 22, p.49.)

Gives the effect of variations of alcoholic strength of menstruum and rate of percolation on the quality of the tincture of capsicum obtained. Also give an organaleptic tests for capsicum with several conclusions.

(Editor) 1933

Capsicum Ointment

Drugg. Circ., 77, Dec., p.33.

Gives the Danish formula and method of preparation.

Tice, L.F. 1933

A Simplified and More Efficient Method for The Extraction of Capsaicin together with the Colorimetric Method for Its Quantitative Determination in Capsicum Fruit and Oleoresin.

Am. Jour. Pharm., 105, p.320. Yrbk. Am. Pharm. Assoc., 22, p.247.

In a thesis presented to the Faculty of the Philadelphia College of Pharmacy and Science discusses the technique for the "isolation of Capsaicin, a colorimetric assay method for the capsaicin content of capsicum, and other things of general interest in the study of capsicum."

(Editor) 1934

Do You Know?

Science News Letter, 25, p.194.

(More than a pound of pure vitamin C in the form of ascorbic acid has been prepared from paprika.)

Munch, J.C., Byers, G. and Pratt, J.H. 1934

Organoleptic Bioassays.

Jour. Amer. Pharm. Assoc., V.23, p.25. (Disp. U.S.A., 22 ed., p.285.)

Give organoleptic tests for a bioassay of capsicum with their conclusions.

Sattler, O.H. 1934

Über Capsicum.

Pharm. Zentralh., 75, p.778. (Yrbk. Am. Pharm. Assoc., 23, p.55.)

A report on a large fruit of capsicum annuum, var. long.

Szent-Gijorgyi, A. 1934

Synthetic Vitamin Produces Striking Unexpected Curves.

Science News Letter, 1934, p.179.

Ascorbic acid is curing pyorrhea and bleeding disorders, and disfiguring colorations of the skin brought on by illness.

Tice, L.F. 1937

(Crystals of Super-Pep Obtained from Capsicum)

Science News Letter, 31, p.173.

Crystals 200 to 500 times as hot as red pepper have been extracted from Capsicum. Crystals are called Capsaicin and are the active principle of Capsicum. Has devised a method for assay of Capsicum which is being considered for adoption as a standard method in the U.S.P.

(Editor) 1938

(Hot Tamales)

Indus. and Eng. Chem. 16, No.9, p.261.

(Tamales are meat (any kind) and hot red pepper, encased in corn-meal mush, wrapped in corn husk.)

Viehoever, A. and Cohen, I. 1938

Mechanism of Action of Aphrodisiac and Other Irritant Drugs.

Am. Jour. Pharm., 110, p.226.

Give general and experimental data of the effect of Capsaicin upon Daphnia; its relative toxicity, a summary and conclusion.

Youngken, H.W. 1938

Observations on Three Louisiana Capsicums.

Jour. Am. Pharm. Assoc., 27, p.323. (Pharm. Abs., 4, p.507).

A study of the entire plants, fruits, seeds, sections of fruits and seeds, ground whole fruits, pungency tests, moisture, non-volatile extractive and ash of the pungent peppers, namely, "Louisiana Long","Louisiana Sport" and "Tobasco" which are used as spices.

LIST OF BOOKS CONSULTED

An American Physician, The Eclectic and General Dispensatory 1 ed., 1827.

Coxe, J.R., (The) Am(erican) Dispens(atory), 1 ed., 1806; 4 ed., 1818; 6 ed. 1825; 7 ed. 1827; 8 ed., 1830; 9 ed. 1831.

King, J., (The) Am(erican) Dispens(atory), 6 ed. 1864; 8 ed. 1872; 10 ed. 1875; 15 ed. 1881; 16 ed. 1889; 18 ed. 1900.

King, J. and Newton, R.S., (The) Eclec(tic) Dispens(atory) of the United States of America, 1 ed., 1852.

Stille, A. and Maisch, J.M., (The) National Dispens(atory), 1 ed. 1879, 2 ed. 1879, 5 ed. 1894.

Thacher, J. (The) Am(erican) New Dispens(atory) 1 ed. 1810; 2 ed. 1813; 4 ed. 1821.

Wood, G.B. and Bache, F., (The) Dispens(atory of the) U(nited) S(tates of) A(merica), 2 ed. 1834; 3 ed. 1836; 4 ed. 1839; 5 ed. 1843; 6 ed. 1845; 7 ed. 1847; 8 ed. 1849; 9 ed. 1851; 10 ed. 1854; 11 ed. 1858; 12 ed. 1865; 13 ed. 1870; 14 ed. 1879; 15 ed. 1883; 16 ed. 1892; 17 ed. 1894; 18 ed. 1899; 19 ed. 1907; 20 ed. 1918; 21 ed. 1926; 22 ed. 1937.

Woodville, W., Medical Botany, 1 ed. 1793.

LIST OF JOURNALS CONSULTED

Am(erican) Jour(nal of) Pharm(acy) 1-110; 1825-1938.

Bull(etin of the) Am(erican) Pharm(aceutical) Assoc(iation) 1-16; 1906-1911.

Jour(nal of the) Am(erican) Pharm(aceutical) Assoc(iation) 1-27; 1912-1938.

Pharm(aceutical) Abs(tracts) 1-4; 1935-1938.

Pharm(aceutical) Arch(ives) 1-6; 1898-1903.

Pharm(aceutical) Jour(nal and Transactions) 1-141; 1842-1939.

Proc(eedings of the) Am(erican) Pharm(aceutical) Assoc(iations) 1-59; 1851-1911.

Y(ea)rb(oo)k (of the) Am(erican) Pharm(aceutical) Assoc(iation) 1-23; 1912-1934.

Y(ea)rb(oo)k (of the) Brit(ish) Pharm(aceutical) Conf(erence) 1-74; 1864-1938.

THE PHARMACOPOEIA OF THE UNITED STATES OF AMERICA

(U.S.P.) (O-XI) (1820-1930)

and

THE NATIONAL FORMULARY

(N.F.) (I-VI) (1888-1935)

HISTORY OF CAPSICUM

U.S.P. 1820 P. p. 31

Capsicum Capsicum annuum, W.I. 1050/

Cayenne pepper Fructus, The fruit./

U.S.P. 1830 (N.T.) p. 25

Capsici Baccae. Capsicum Annuum/

Capsicum Berries/

Prop. Long, pointed, pendulous pods; colour red; odour/aromatic and pungent; taste in a high degree acrid and burning;/ qualities imperfectly yielded to water; more completely extracted by/ alcohol and ether./

Med. Oper. Stimulent, rubefacient. Dose, grs. x./

U.S.P. 1830 (Phil.) p. 7

Capsicum Capsicum annuum, W.i. 1050/

Cayenne Pepper Fructus. The fruit./

U.S.P. 1840 P. p. 16

Capsicum. Cayenne Pepper./

The fruit of Capsicum annuum./

U.S.P. 1850 P. p. 19

Capsicum. Cayenne Pepper/

The fruit of Capsicum annuum, and of other/ species of Capsicum./

U.S.P. 1860 .P. p. 22

Capsicum. Capsicum/

Syn. Cayenne Pepper./

The fruit of Capsicum annuum, and of other/species of capsicum.

U.S.P. 1870 P. p. 23

Capsicum. Capsicum/

Syn. Cayenne and African Pepper/

The fruit of Capsicum annuum, Capsicum fastigiatum/ (Blum), and of other species of capsicum.

U.S.P. 1880 p. 65

Capsicum/ Capsicum/

Cayenne Pepper. African Pepper. /

The fruit of Capsicum fastigiatum Blume (Nat. Ord., Solanaceae.)./

Conical, from half to three-quarters of an inch (12 to 18 millimeters) long, sup-/ported by a flattish cup-shaped, five-toothed calyx, with a red, shining, membra-/nous and translucent fericarp enclosing two cells, and containing flat, uniform./ yellowish seeds attached to a thick, central placenta. It has a peculiar odor, and/ an intensely hot taste./

Preparations: Extractum Capsici Fluidum. Oleoresina Capsici. Tinctura Capsici./

U.S.P. 1890 p. 78

Capsicum/ Capsicum/

Cayenne Pepper. African Pepper. /

The fruit of Capsicum fastigiatum Blume (nat. ord. Solanaceae.)./

Oblong-conical, from 10 to 20 mm. long, supported by a flattish, cup-shaped,/ fine toothed calyx, with a red, shining, membranous and translucent pericarp,/ enclosing two cells, and containing flat, reniform, yellowish seeds attached to/a thick, central placenta. It has a peculiar odor, and an intensely hot taste./

Preparations: Extractum Capaci Fluidum, Oleoresina Capsici. Tinctura capsici./

U.S.P. 1900 p. 89

Capsicum./

Capsicum./

The dried, ripe fruit of Capsicum fastigiatum Blume (Fam. Solanaceal) deprived of its calyx.

Oblong-conical, from 10 to 20 mm. long, with a red, shining, membranous and/ translucent pericarp; two-celled, and containing 10 to 20 flat, uniform, yellow-/ish seeds attached to a thick, central placenta; odor distinct; taste intensely/ pungent. Few or no. starch grains or sclerenchymatous fibres should be present/ in the powder./

Average dose. - 0.065 Gm. = 65 milligrammes (1 grain)./

U.S.P. 1910 p. 100

Capsicum/ Capsicum/

Capsic. - Cayenne Pepper African Chillies/

The dried ripe fruits of Capsicum frutescens Linne (Fam. Solanaceae),/ without the presence or admixture of more than 2 per cent. of stems,/ calyxes or other foreign matter./

Oblong-conical; from 8 to 20 mm. in length and from 2 to 15 mm. in diameter;/ pericarp brownish-red or orange, shining, membranous and translucent; 2- or/ 3-locular, united below, and containing 6 to 17 flat, uniform, yellowish seeds/ attached to the placenta or frequently separated from it; odor characteristic,/ sternutatory; taste intensely pungent./

The Calyx, when present, light greenish-brown, inferior, inconspicuous,/ 5-toothed, usually attached to a long straight peduncle.

The powder is yellowish-brown; mounts made with hydrated chloral T.S./ and examined under the microscope show yellowish red oil globules; stone cells/of two kinds, those of the endocarp being more or less elongated walls yellowish,/ uniformly and moderately thickened,/ wavy in outline and strongly lignified./

Capsicum yields not less than 15 per cent. of non-volatile extractive, soluble/ in ether (see Part II, Test No.13)./

Capsicum yields not more than 7 per cent of ash. The amount of ash, insoluble in hydrochloric acid, does not exceed 1 per cent of the weight of capsicum taken./

Preparations - Oleoresina Capsici, Tinctura Capsici.)

Average Dose - metric, 0.06 Gm. - Apothecarus, 1 grain./

U.S.P. 1920 p. 97

Capsicum. Capsicum/

Capsic.- Cayenne Pepper. African Chillies/

Capsicum is the dried ripe fruit of Capssicum frutescens Linne (Fam./Solanaceae), grown in Africa./

Capsicum contains not more than 3 per cent of its stems, calyxes, and/ not more than 1 per cent of other foreign organic matter, yield not/ less than 12 per cent of non-volatile ether-soluble extractive and not/ more than 1.25 per cent of acid-insoluble ash./

Description and physical properties./ Unground capsicum-oblong conical, usually laterally compressed, from 10 to/ 25 mm. in length, from 4 to 8 mm. in diameter, 2- or 3-locular, the dissepi-/ments united to a short conical placenta at the base of the fruit; pericarp/orange to dark brownish-red, glabrous, shriveled, dull, thin, membranous;/ inner surface longitudinally, striate, with 2 or 3 distinct longitudinal ridges;/ seeds, yellowish or brownish, 6 to 21, circular or irregular, flattened, from/ 2 to 4 mm. in diameter, with a

thickened edge and prominent pointed micro-/pyle; odor characteristic, sternutatory; taste intensely pungent./

Calyx light greenish-brown, inconspicuous, inferior, 5-toothed, usually attached to a long, straight peduncle./ Structure - Outer epidermis of mostly quadrangular cells from 0.020 to 0.080 mm./ in length, from 0.020 to 0.045 mm. in width and from 0.015 to 0.020 mm. deep,/ arranged in regular rows, with thickened and cutinized outer and radial walls,/ the surface of the cuticle finely striated, the radial walls somewhat wavy and/ very slightly beaded; mesocarp of thin-walled parenchyma containing reddish-/ yellow oil globules; endocarp of elongated cells, some of them very thin-walled,/ others in large oval areas, with thickened, beaded lignified walls. Epidermal/ cells of seed irregular in outline up to 0.250 mm. in length, with very wavy, contorted, lignified walls, the cells from the edge of the seed much thicker-/ walled than those from the flat surface of the seed. Embryo curved and/ embedded in the endosperm, the latter consisting of small, thin-walled par-/enchuma, containing small oleurone grains and fixed oil./ Powdered Capsicum - Yellowish or reddish-brown; consists of thin-walled par-/enchuma containing oil globules, epidermal cells of pericarp and seed-coat and/ stone cells of endocarp./ Tests for purity - Fragments of pericarp with outer epidermis consisting of irregu-/lar cells up to 0.100 mm. in length, not arranged in regular rows and with/ strongly beaded radial walls, and with a hypodermis of angular cells with/ thickened, beaded walls, indicate the presence of Japanese or East Indian/ Capsicum./

Capsicum should meet the requirements of the following test: Mix well 1/Gm. of powdered Capsicum in 50 cc. of alcohol in a stoppered flask and macer-/ate for twenty-four hours. Dilute 0.1 cc. of the clear, supernatant liquid with/ 140 cc. of distilled water containing 10 per cent of sucrose: 5 cc. of this dilution swallowed at once will produce a distinct sensation of the pungency of Capsi-/cum in the throat of at least two out of three individuals./

Assay - For non-volatile ether-soluble extractive, proceed as directed on page 466./

Preparations - Emplastrum Capsici (from Oleoresin), Oleoresina, Capsici, Tinctura/ Capsici.)

Average Dose - Metric, 0.06 Gm. - Apothecaries, 1 grain./

U.S.P. 1930 p. 105

Capsicum/ Capsicum/

Capsic.- Cayenne Pepper, African Chillies/

Capsicum in the dried ripe fruit of Capsicum frutescens Linne (Fam./ Solanaceae), grown in Africa./

Capsicum contains not more than 3 per cent of its stems and calyxes, / and not more than 1 per cent of other foreign organic matter, page 472./ It yields not less than 12 per cent of non-volatile, ether-soluble extractive/ and not more than 1.25 per cent of acid-insoluble ash, page 473./

Description and physical properties -/ Unground Capsicum - Oblong conical, usually laterally compressed, from 10 to/ 25 mm. in length, from 4 to 8 mm. in diameter, 2- or 3-locular, the dissepi-/ments united to a short conical placenta at the base of the fruit; pericarp/ orange to dark brownish-red, glabrous, shriveled, dull, thin membranous;/ inner surface longitudinally striate, with 2 or 3 distinct longitudinal ridges;/ seeds, yellowish or brownish, 6 to 21, circular or irregular, flattened, from 21 to 4 mm. in diameter, with a thickened edge and prominent, pointed micro-/pyle; odor characteristic, sternulatory; taste intensely pungent./

Calyx light greenish-brown inconspicuous, inferior, 5-toothed, usually/attached to a long, straight peduncle./

Structure - Outer epidermis of mostly quadrangular cells from 0.020 to 0.080 mm./ in length, from 0.020 to 0.045 mm. in width and from 0.015 to 0.020 mm./ deep, arranged in regular rows, with thickened and cutinized outer and/ radial walls, the surface of the cuticle finely striated, the radial walls some-/what wavy and very slightly beaded; mesocarp of thin-walled parenchyma/ containing reddish-yellow oil globules or occasionally microcrystals; endo-/ carp of elongated cells, some of them very thin-walled, others in large oval/areas, with thickened, beaded lignified walls. Epidermal cells of seed ir-/regular in outline up to 0.250 mm. in length, with very wavy, contorted, lignified walls, the cells from the edge of the seed much thicker-walled than/those from the flat surface of the seed. Embryo curved and embedded in/ the endosperm, the latter consisting of small parenchyma, containing small/ aleurone grains and fixed oil./

Powdered Capsicum - yellowish or reddish brown; consists of thin-walled puren-/chyma containing oil globules, epidermal cells of pericarp with rectangular/ and irregular cells, tissues of seed-coat and stone cells of endocarp; occasional/ fibrovascular elements and calyx tissues./

Tests for purity - Examine capsicum for the presence of fragments of pericarp/ with an outer epidermis consisting of irregular cells up to 0.100 mm. in length/ not arranged in regular rows and with strongly beaded radial walls, and with/ a hypodermis of angular cells with thickened beaded walls; if found, they/ indicate the presence of Japanese or East Indian Capsicum or of Paprika./

Capsicum should meet the requirements of the following test: mix well/ 1 Gm. of powdered capsicum with 50 cc. of alcohol in a stoppered flask and/ macerate for twenty-four hours. Dilute 0.1 cc. of the clear, supernatant/ liquid with 140 cc. of distilled water containing 10 per cent of sucrose: 5 cc./ of this dilution swallowed slowly will produce a distinct sensation of the/ pungency of Capsicum in the throat of at least two out of three individuals./

Assay - Proceed as directed for the determination of non-volatile ether-soluble/ extractive, page 475./

Preparation- Tinctura Capsici./

Average Dose - Metric, 0.06 Gm. - Apothecaries, 1 grain.

SUMMARY OF U.S.P. and N.F. DATA OF CAPSICUM

Where and When Official:

U.S.P. 1820; '30 (N.Y.); '30 (Phil.); '40; '50; '60; '70; '80; '90; 1900; '10; '20; '30.

Official Latin Title:

Caprici Baccae, 1830 (N.Y.)
Capsicum, 1820; '30 (Phil.); '40; '50; '60; '70; '80; '90; 1900; '10; '20; '30.

Official English Title:

Cayenne Pepper, 1820; '30 (Phil.); '40; '50.
Capsicum Berries, 1830 (N.T.)
Capsicum, 1860; '70; '80; '90; 1900; '10; '20; '30.

Official Abbreviation:

Capsic., 1910; '20; '30.

Official Synonym:

Cayenne pepper, 1860; 1910; '20; '30.
Cayenne and African Pepper, 1870; '80; '90.
African Chillies, 1910; '20; '30.

Part Used:

Fructus. The fruit, 1830 N.Y., 1820; '30 (Phil.).
The fruit of, 1840; '50; '60; '70; '80; '90.
The dried, ripe fruit of - deprived of its calyx, 1900.
The dried ripe fruit of - without the presence or admixture of more than 2 per cent of stems, calyxes or other foreign matter, 1910.
The dried ripe fruit of - grown in Africa, 1920; '30.

Scientific Name:

Capsicum Annuum, 1820; '30 (N.Y.); '30 (Phil.); '40.
Capsicum annuum and of other species of capsicum, 1850; '60.
Capsicum annuum, Capsicum fastigiatum and of other species of Capsicum, 1870.
Capsicum fastigiatum, 1880; '90; 1900;.
Capsicum frutescens, 1910; '20; '30.

Family:

(Nat. Ord., Solanaceae), 1880; '90.
(Fam. Solanaceae), 1900; '10; '20; '30.

Official Description:

U.S.P. 1880; '90; 1900; '10; '20; '30.

Official Preparations:

Extractum Capsici; 1880; '90.
Fluidum, Oleoresina Capsici; 1880.
Tinctura Capsici; 1880; 90; 1910; '20; '30.
Oleoresina Capsici; 1890; 1910; '20.
Emplastrum Capsici (from Oleoresin); 1920.

Official Dose:

Grs. X, 1830 (N.Y.)
0.065 Gm.; 1 grain; 1900; '10;'20;30.

APPROVED: W O Richtmann

Prof. of Pharmacognosy

DATE: June 6, 1940